

WHAT IS CLAIMED IS:

1. A close-wound coil comprising:

a first predetermined axis; and

5 a wire which is wound spirally and closely over a
predetermined length around the first axis, and has a
center axis extending in the lengthwise direction
thereof;

wherein the wire has a section vertical to the
center axis, a second axis passing across the center
10 axis within the section and vertical to the first axis,
and a third axis passing across the center axis within
the section and vertical to the second axis;

the wire has substantially the same flexural
rigidity as that of a reference wire having a perfect
15 circle section with a diameter of the longer one of a
dimension along the second axis and a dimension along
third axis; and

the torsional rigidity of the wire is lower than
the torsional rigidity of the reference wire.

20 2. A close-wound coil comprising:

a first predetermined axis; and

a wire which is wound spirally and closely over a
predetermined length around the first axis, and has a
center axis extending in the length direction thereof;

25 wherein the wire has a section vertical to the
center axis, a second axis passing across the center
axis within the section and vertical to the first axis,

and a third axis passing across the center axis within the section and vertical to the second axis, and

the section is formed to have the second moment of area concerning the second axis smaller than the second moment of area concerning the third axis.

3. A close-wound coil comprising:

a first predetermined axis; and

a wire which is wound spirally and closely over a predetermined length around the first axis, and has a center axis extending in the length direction of the first axis;

wherein the wire has a section vertical to the center axis, a second axis passing across the center axis within the section and vertical to the first axis, and a third axis passing across the center axis within the section and vertical to the second axis, and

the section is formed to have the dimension along the second axis larger than the dimension along the third axis.

4. The close-wound coil according to claim 3, wherein the wire has substantially the same torsional rigidity as that of a wire having a perfect circle section with a predetermined diameter, and the flexural rigidity concerning the third axis larger than the flexural rigidity of the wire having a perfect circle section.

5. The close-wound coil according to claim 3,

wherein the wire has the flexural rigidity concerning the third axis substantially the same as the flexural rigidity of a wire having a perfect circle section with a predetermined diameter, and the torsional rigidity lower than the torsional rigidity of the wire having a perfect circle section.

6. The close-wound coil according to claim 1, wherein the close-wound coil can be inserted into the channel of a medical endoscope.

7. A medical treatment tool comprising:
a close-wound coil having a distal end and a proximal end, the close-wound coil including:
a first axis extending the distal end and proximal end;

a wire which is wound spirally and closely over a predetermined length around the first axis, and has a center axis extending in the length direction thereof;
the wire having a section vertical to the center axis, a second axis passing across the center axis within the section and vertical to the first axis, and a third axis passing across the center axis within the section and vertical to the second axis;

a rotation control section which is provided at the proximal end of the close-wound coil, for rotating the close-wound coil around the first axis; and

a treatment section which is located closer to the distal end than the close-wound coil, and receives the

rotation force from the rotation control section
through the close-wound coil;

the wire having substantially the same flexural
rigidity as that of a reference wire having a perfect
5 circle section with a predetermined diameter; and

the torsional rigidity of the wire being lower
than the torsional rigidity of the reference wire.

8. The medical treatment tool according to
claim 7, wherein the treatment section is fixed to the
10 distal end of the close-wound coil.

9. The medical treatment tool according to
claim 7, further comprising a control wire inserted
movable forward and rearward into the close-wound coil,
wherein the treatment section is fixed to the end of
15 the control wire.

10. The medical treatment tool according to
claim 7, wherein the treatment section is a clip which
can be retained in a living body.

11. The medical treatment tool according to
20 claim 10, further comprising a second close-wound coil
which is connected to the distal end of the close-wound
coil, located between the treatment section and the
close-wound coil, and has the inside diameter larger
than the inside diameter of the close-wound coil;

25 wherein the clip is deformable between a first
form fit to the distal end of the second close-wound
coil and a second form stored inside of the second

close-wound coil; and

the length of the second close-wound coil is substantially the same as the axial direction length of the clip stored in the second form inside of the second close-wound coil.

12. The medical treatment tool according to claim 7, wherein the medical treatment tool can be inserted into the channel of a medical endoscope.

13. A medical treatment tool used in combination with a medical endoscope, comprising:

a mantle tube; and

a close-wound coil inserted into the mantle tube; the close-wound coil comprising;

a first axis extending between the distal end and proximal end, and

a wire which is wound spirally and closely over a predetermined length around the first axis, and has a center axis extending in the length direction thereof,

the wire having a section vertical to the center axis, a second axis passing across the center axis within the section and vertical to the first axis, and a third axis passing across the center axis within the section and vertical to the second axis; the medical treatment tool further comprising;

a control section for rotating the close-wound coil with respect to the mantle tube;

wherein the wire has substantially the same

flexural rigidity as that of a reference wire having a perfect circle section with a predetermined diameter; and

5 the torsional rigidity of the wire is lower than the torsional rigidity of the reference wire.

14. The medical treatment tool according to claim 13, wherein the endoscope has a channel, and the medical treatment tool can be inserted into the channel.

10 15. The medical treatment tool according to claim 13, wherein the mantle tube has flexibility.

16. A medical treatment tool for an endoscope used in combination with a medical endoscope having a slender channel, comprising:

15 a close-wound coil which can be inserted into the channel, the close-wound coil including;

a first axis extending between the distal end and proximal end; and

20 a wire which is wound spirally and closely over a predetermined length around the first axis, and has a center axis extending in the length direction thereof;

wherein the wire has a section vertical to the center axis, a second axis passing across the center axis within the section and vertical to the first axis, and a third axis passing across the center axis within the section and vertical to the second axis, the
25 medical treatment tool further comprising;

a control section which is provided in the close-wound coil and rotates the close-wound coil with respect to the channel;

5 wherein the wire has substantially the same flexural rigidity as that of a reference wire having a perfect circle section with a predetermined diameter; and

the torsional rigidity of the wire is lower than the torsional rigidity of the reference wire.

10 17. The treatment tool for an endoscope according to claim 16, further comprising an extension control member placed in the close-wound coil.